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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/637,495	08/11/2000	Gregory J. Hewlett	TI-28454	7603

23494 7590 05/03/2006

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EXAMINER
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NELSON, ALECIA DIANE

ART UNIT	PAPER NUMBER
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2629

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/637,495

Applicant(s)

HEWLETT ET AL.

Examiner

Alecia D. Nelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. ***Claims 1-3*** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically the claims recite that the “bits of said image word are displayed in a same predetermined order for each refresh period” while “not all bits of the image data word are displayed in each refresh period.” It is not clear to the examiner how the **same** order for each refresh period is maintained when not all of the bits of the image data word are displayed. In Figure 19 image word 1904 consists of bit periods 1912, 1914, 1916, 1918, image word 1906 consists of bit periods 1912, 1914, 1916, and 1920, while 1912, 1914, 1916 are displayed in the same order, 1918 and 1920 are not being that they aren't included in one or the other of image word 1904 and 1906.

***Claims 4-9*** are rejected as being dependent on a rejected base claim. The claims will be rejected as best understood by the examiner, wherein the above mentioned limitation as recited in claims 1-3 will be interpreted as each refresh period containing some of the same bits of the image word, wherein the bits that are included are displayed in the same order.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. ***Claims 1-9*** are rejected under 35 U.S.C. 102(e) as being anticipated by Baldwin (U.S. Patent No. 5,986,640).

With reference to **claim 1**, Baldwin teaches a method of receiving an image word for an image pixel (column 4, lines 1-4) and the image data word comprises of a plurality of bits (see Figures 4 and 5). Baldwin divides an image frame period into at least two refresh (reset) periods (see column 5, lines 8-20), wherein each refresh period comprises a period in which at least two image data bits are displayed (figure 4a-4e shows the division of sub-frames and column 5, lines 8-59). As shown in figures 6a - 6e, Baldwin teaches displaying the first image data bit during some, but not all, of the refresh period and displaying the second image data bit during more of the refresh

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period than the first image data bit was displayed. Further in Figure 6c it can be seen that the bits of the image word are displayed in a same predetermined order (from the outside to the inside) for each of the refresh periods, although not all bits (bits 2 and 1) of the image data word are displayed in each refresh period (see column 7, lines 14-62).

With reference to **claim 2**, Baldwin teaches all that is required as explained above with reference to **claim 1**, Baldwin also teaches that these the display periods are allocated to prevent flicker of the image data bit display by the method described in rejection of **claim 1** (column 7, lines 19-25 and lines 34-47).

With reference to **claim 3**, Baldwin teaches all that is required as explained above with reference to **claims 1 and 2**, Baldwin also teaches a controlling circuit (119) that receives the video signal and determines the amount of time the light should be modulated on the mirror devices (column 4, lines 1-15) in accordance to the limitations as explained above with reference to **claims 1 and 2**; a display device (101) in electrical communication with the controller (see column 3, line 39-column 4, line 22), said display device for providing a modulated light beam to each of an array (117) of image pixels (see column 3, lines 58-62), said modulation in response to said processed image data from said controller (see column 4, lines 16-44).

With reference to **claims 4-9**, Baldwin teaches in Figure 6e a method of dividing an image frame period into at least three refresh periods wherein a first image data bit is

displayed during at least one refresh period (1, 2), a second image data bit is displayed during at least two refresh periods (4a, 4b), and a third said image data bit is displayed during at least three refresh periods (16a, 16b, 16c) and where first second and third image data bits are displayed during different numbers of refresh periods.

### ***Response to Arguments***

5. Applicant's arguments filed 6/20/05 have been fully considered but they are not persuasive.

It is argued by the applicant that the reference fails to teach "an image word is shown in multiple refresh periods within a frame period, with the bits of the image word shown in a predetermined order in each refresh period and not all bits of the image word are shown in each refresh period". However it is the examiner's position in that the applied reference teaches the newly claimed limitation. More specifically, in Figures 6a-6e, it can be seen that each refresh period, as defined above, consist of a period in which at least two image data bits are displayed. Also it is taught that the reset pulses are applied every two units to prepare the mirror device for their next orientation state (see column 8, lines 13-15). Therefore, as explained above Figure 6c teaches an image word shown in a predetermined order starting from the outside moving inward, in each of the refresh periods.

For these reasons it is believed that the present reference reads on the limitations of the claimed invention.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

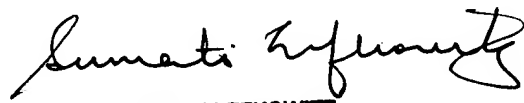
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alecia D. Nelson whose telephone number is 571-272-7771. The examiner can normally be reached on Monday-Friday 9:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

adn/ADN  
April 20, 2006



SUMATI LEFKOWITZ  
SUPERVISORY PATENT EXAMINER